
TABLE OF CONTENTS

ACKNOWLEDGEMENTS	1
CHAPTER 1: INTRODUCTION	6
<i>DESCRIPTION OF THE UNDERTAKING</i>	6
CHAPTER 2: HISTORICAL BACKGROUND	4
<i>ENVIRONMENT</i>	4
<i>SUSSEX COUNTY HISTORY</i>	4
<i>SITE HISTORY</i>	9
<i>THE MIDDLEFORD COMMUNITY</i>	25
<i>Founding the community:</i>	25
<i>The Town Lots:</i>	30
<i>The Town and Regional Residents:</i>	45
<i>The African American community of Middleford</i>	51
CHAPTER 3: METHODS	57
<i>INITIAL SITE RECORDING</i>	57
<i>ARCHIVAL RESEARCH</i>	57
<i>SURVEY AND EVALUATION</i>	57
<i>MAPPING</i>	58
<i>MITIGATION AND ARCHAEOLOGICAL DATA RECOVERY</i>	58
CHAPTER 4: FINDINGS	62
<i>SURVEY AND TESTING SUMMARY</i>	62
<i>Shovel Tests</i>	62
<i>Test Units</i>	64
<i>Underwater Components</i>	66
CHAPTER 5: DATA RECOVERY EXCAVATIONS	67
BULKHEAD 1.....	72
<i>Feature 1</i>	72
BULKHEAD 2.....	73
<i>Main Bulkhead</i>	74
<i>Wing Wall</i>	82
BULKHEAD 3.....	82
<i>Wing Wall East of Stream Channel</i>	86
<i>Main Bulkhead East of Stream Channel</i>	86
<i>Wing Wall West of Stream Channel</i>	86
MISCELLANEOUS.....	87
<i>Feature 3</i>	87
<i>Feature 13</i>	87
<i>Feature 18</i>	87
<i>Feature 20</i>	87
STREAM CHANNEL INVESTIGATION.....	87
<i>Channel Excavation</i>	88
CONSTRUCTION MONITORING.....	90

CHAPTER 6: FEATURE INTERPRETATION..... 92

CHAPTER 7: SLAG ANALYSIS AND IRONMAKING..... 97

 INTRODUCTION 97

 HISTORY OF IRONMAKING 97

 PIXE ANALYSIS 98

CHAPTER 8: HYDROLOGY AND OPERATING PARAMETERS OF THE MILLS 100

CHAPTER 9: CONCLUSIONS..... 109

 THE ARCHAEOLOGY OF WATERPOWER..... 109

 CONTRIBUTIONS TO EVALUATING MILL SITES..... 110

 THE VALUE OF MORE ARCHAEOLOGY AT MIDDLEFORD MILLS..... 111

REFERENCES CITED 113

LIST OF FIGURES

Figure 1: Plans for Bridge 238 on S 46..... 1

Figure 2: Bridge 238 Project Location..... 2

Figure 3: Middleford Mills Location on Sussex County Elevation Model..... 3

Figure 4: Lord Baltimore granted several patents to colonists in western Delaware 5

Figure 5. 1749 map illustrating the lack of roads in the southwestern part of the state..... 7

Figure 6. 1862 map showing the railroads and roads of southern Delaware. 9

Figure 7: Birdseye view of the Huffington tracts..... 10

Figure 8: Earliest draft of Middleford soon after its establishment in 1807 12

Figure 9: The 1831 plat of Middleford showing town lots and the mills. 15

Figure 10: Middleford in 1846..... 17

Figure 11: Middelford in 1860..... 19

Figure 12: Possible distribution of mill buildings along dam..... 21

Figure 13: Middleford and the mills in 1900. 22

Figure 14: Middelford and the mills in 1908. 23

Figure 15: Middleford and the mill area on the 1915 Seaford Quadrangle USGS map. . 24

Figure 16: Bird’s-eye view of Middleford Mills ca. 1834..... 27

Figure 17: Bird’s-eye view of Middleford Mills ca. 1846..... 28

Figure 18: The Venture Tract..... 29

Figure 19: Portion of 1831 Middleford plat with Daniel Oney’s lot. 31

Figure 20: Barkley Townsend lots in 1831 34

Figure 21: Enlargement of 1831 plat of Middleford..... 34

Figure 22: An 1835 plot of Mitchell Carey’s Lot #37 in Middleford..... 35

Figures 23: Front of a sale notice for Hooper Elliot’s Lot #51 and house in Middleford in 1835..... 36

Figures 24: Back of an 1835 sale notice for Hooper Elliot’s Lot #51 and house in Middleford..... 36

Figure 25: Middleford lots given to the Stuart brothers.....	37
Figure 26: Enlargement of 1846 plat of Middleford.....	38
Figure 27: Plat of Middleford in 1860.....	39
Figure 28: Plat from Baist’s Atlas (1868).....	40
Figure 29: Plat of Middleford from Baist (1868).....	41
Figure 30: Middleford as plotted in 1900.....	42
Figure 31: A 1908 Middleford plat map.....	43
Figure 32: Middleford as represented on the 1915 USGS Seaford Quadrangle map.....	44
Figure 33: Old stock printing store in Middleford.....	45
Figure 34: Flyer from the Mercantile Agency of RG Dun & Co.....	50
Figure 35: House formerly belonging to James Rawlins, Lot’s son.....	51
Figure 36: Sale Bill for Elijah Collin, “Negro” for land in Seaford.....	55
Figure 37: The Middleford School for persons of color in the mid-1920s.....	56
Figure 38: Middleford Mills Archaeological District.....	59
Figure 39: Mini Excavator in the Cofferdam.....	61
Figure 40: STP Locations.....	63
Figure 41: Planview of Excavations.....	65
Figure 42: Planview of cofferdam.....	68
Figure 43: Stratigraphy, Stream cross-section.....	69
Figure 44: Planview of Bulkheads.....	72
Figure 45: Planview Bulkhead 2.....	75
Figure 46: Central portion of Feature 2, underneath the diversion culvert. Facing Southeast.....	76
Figure 47: Schematic Diagram of Sheet Piling Installation.....	77
Figure 48: East End, Bulkhead 2, Feature 2, Crash Rack. Facing South.....	77
Figure 49: Overhead view of Bulkhead 2, Feature 2 and Crash Rack.....	78
Figure 50: Reconstructed Bulkhead.....	79
Figure 52: Bulkhead 3 on East Side of Stream Channel.....	83
Figure 53: Planview of Bulkhead 3, Feature 8.....	84
Figure 54: Bulkhead 3, Feature 8, Facing East.....	85
Figure 55: Stratigraphy, along Streambed.....	89
Figure 56: Wing Wall Monitoring, Plan and Profile Views.....	91
Figure 57: Excavations at Cabbage Mill.....	92
Figure 58: Culvert-like waste gates, Greenbank Mill, Willmington, DE.....	94
Figure 59: Removable-Board Type Waste Gate, Hearn and Rawlins Mill, Seaford, DE.....	95
Figure 60: Waste Gates in Rip Rap Dam.....	96
Figure 61: Removable-Board Type Waste Gates; Kirby’s Mill, Medford NJ.....	96
Figure 62: Reconstruction of the 18th-Century Middleford Mills Mill Pond.....	103
Figure 63: Reconstruction of the Middleford Mills.....	104
Figure 64: Reconstruction of the Middleford Mills.....	108

LIST OF TABLES

Table 1: List of original owners of the private lots sold in Middleford from 1806 to 1825. ³²	
Table 2: Occupations of the early residents of Middleford (SCDB <i>passim</i>).....	46
Table 3: Middleford occupations from 1850-1880.....	47

Table 4: Population analysis of Middleford from 1807-1900..... 47
Table 5: Population statistics for Middleford from 1810 to 1840..... 52
Table 6: Archaeological Features Grouped by Structural Association..... 70
Table 7: PIXE Analysis Results..... 98
Table 8: Mills of Middleford Mills 105

Appendix:

Chain of Title, Middleford Mills..... 121
Middleford Mills Tax Assessments..... 122